



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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GOVERNOR

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**North Carolina Board of Transportation
Environmental Planning and Policy Committee
Meeting Minutes for April 5, 2006**

A meeting of the Environmental Planning and Policy Committee (EPPC) was held April 5, 2006 at 8:30 AM in the Board Room (Room 150) of the Transportation Building. Board Member Nina Szlosberg chaired the meeting. Other Board of Transportation members that attended were:

Tom Betts	Conrad Burrell
Bob Collier	Marion Cowell
Nancy Dunn	Doug Galyon
Arnold Lakey	Cam McRae
Andrew Perkins	

Other attendees included:

Bob Andrews	Julie Hunkins	Ellis Powell
Tad Boggs	Berry Jenkins	Andrew Sawyer
Laura Boothe	Tim Johnson	Roy Shelton
Jennifer Bumgardner	Elaine Loyack	Amy Simes
Patrick Butler	Becky Luce-Clark	Dan Thomas
Denise Choy	Ehren Meister	Greg Thorpe
Glenn Dennison	Mike Mills	Secretary Tippet
C.A. Gardner	Cynthia Muldrow	Steve Varnedoe
Ricky Greene	Jon Nance	Marcus Wilner
Gail Grimes	Ken Pace	
Phil Harris	Allen Pope	

Ms. Szlosberg called the meeting to order at 8:30 AM and circulated the attendance sheet. Ms. Szlosberg accepted a motion to approve the meeting minutes from the March committee meeting and the minutes were approved as presented.

Ms. Szlosberg began by commenting that she had recently been in Seattle attending a national conference for the League of Conservation Voters. It was a great opportunity to learn about what is going on in the other States. Much of the discussion centered on global warming and the initiatives underway nationally. People knew that North Carolina had begun to address this issue.

Ms. Szlosberg also talked about a “Special Report Global Warming” from Time Magazine (April 3, 2006 issue). Ms. Szlosberg stated that we in Transportation have a lot of responsibility on this issue because much of the problem is caused by mobile sources.

Ms. Szlosberg introduced Mr. Michael Shore to present “NC at the Crossroads: The Intersection of Global Warming & Transportation”. Michael is the Southeast Air Quality Manager of the North Carolina Office of Environmental Defense. He directs the air quality initiative in the southeast United States.

Mr. Michael Shore opened by stating there are a lot of reasons we want to address global warming. One reason is our children expect us to do the right thing. The other reason is that there are going to be tremendous business and economic opportunities that come with solving the problem of global warming. The NC Global Warming Commission had its third meeting on April 4, 2006. He commented that it is very impressive that our State is trying to figure out what its role should be in addressing this problem.

Mr. Shore continued by talking about the science behind global warming. The Earth’s atmosphere acts as a “blanket” that keeps the earth warm. Carbon dioxide is one of those gasses that are really good in retaining heat. The more carbon dioxide pollution we put into the air, the thicker the “blanket” in the earth’s atmosphere becomes. Then, naturally the earth warms. That is essentially what global warming is. Historical data show that as carbon dioxide levels rise so do temperatures. These are very closely correlated. Now, carbon dioxide levels are rising dramatically. Mr. Shore showed graphical data on temperature and carbon dioxide from 1860 to the present that clearly shows a warming trend we are experiencing in the world and stated that there is no longer any scientific debate on this issue. The National Academy of Sciences states that: “Greenhouse gases are accumulating in the Earth’s atmosphere as a result of human activities, causing surface air temperatures to rise.” “We urge all nations...to take prompt action to reduce causes of climate change.”

Mr. Shore then turned his presentation towards the consequences of global warming. The adverse consequences of a warming planet seem to significantly outnumber the potential benefits, especially for North Carolina. There are all kinds of consequences. There are impacts on health, water resources, ecosystems, and the coast. North Carolina is expected to get warmer and dryer. Sea level rise over the next hundred years is predicted to be between 1 to 3 feet. Mr. Shore showed a map of NC coastal lands that would be impacted by an 18-inch rise in sea level. There are two things impacting sea level. One is the polar ice melting adding water to the oceans. The other is that warmer water expands. Mr. Shore stated that there is an important planning issue for the Board of Transportation concerning the infrastructure and roads given the permanent inundation that may and will happen in the future. As sea level rises, imagine what a Hurricane Fran or Floyd would do if sea level were 18 inches higher than it is today. Another issue is the connection between hurricanes and global warming. Science is indicating that there may be a connection between the intensity of hurricanes and global warming.

Mr. Shore continued by discussing sources of global warming. The United States alone accounts for 25 percent of the world’s greenhouse gases with China and India expected to pass us sometime after 20 years. In North Carolina, the primary sources of greenhouse gases are from

utilities (42%) and transportation (33%). Mr. Shore stated that he felt the Board of Transportation is already thinking about air pollution and quality of life issues. Congestion, sprawl, road maintenance, and diesel emissions are all challenges that we want to solve and solving those is helping to solve the problem of global warming as well.

Mr. Shore proceeded to talk about solutions by looking at the challenge in two ways. One way is in terms of complexity and cost, and seeing it as a problem that needs to be solved by the federal government and internationally and stay away from it at the State level. The other way is to look for the opportunities and what are the differences that North Carolina can make on this problem. How can we create opportunities for business given the things that need to happen to reduce global warming. Scientists say there are 14 areas where we could make improvements, from having efficient buildings, to wind power, to nuclear power, to reducing deforestation. And, if we were to make progress in seven (7) of these areas, we could stabilize climate over a 50-year horizon. So, there are a lot of solutions to the problem. There were four (4) solution areas Mr. Shore talked about: vehicle miles traveled (VMT) and congestion, advanced technologies, diesel pollution, and biofuels.

Mr. Shore continued stating that he was not an expert on VMT and congestion policy issues. However, if the Board of Transportation wanted to have detailed conversation at a future meeting, a national expert, Michael Replogle, would be happy to come down and make a presentation.

Advance technology solutions include hybrid vehicles, ultra-light vehicle designed for better gas mileage, and fuel cell technology. There are huge business opportunities. There are more than a dozen companies in North Carolina that manufacture components for fuel cells. Additionally, North Carolina is considering a Clean Cars Act.

Another area is with diesel pollution. Diesel pollution cuts twice on the global warming problem. Burning diesel fuel releases carbon dioxide. But also, it produces soot or carbon black. This pollution absorbs radiation and that is its own greenhouse gas. Diesel emissions are a huge part of the global source pollution problem. These come from on-road transportation vehicles and off-road vehicles like those used in road construction.

There have been federal standards put in place to make both on and off-road vehicles much cleaner than they are today. The challenge is that diesel engines run a long time, so one opportunity is to retrofit diesel engines to make them cleaner. Efforts are underway to retrofit school busses as an obvious source. There is a program to adopt a school bus and finance an engine retrofit.

The next source is the off-road equipment. Mr. Shore stated that it would be interesting if North Carolina could pilot a road building contract by including a stipulation that the equipment would need to be retrofitted. Additionally, there are opportunities with the goods transport industry with truck idling producing pollution.

Mr. Shore then proceeded to biofuels as the last area of solutions he was going to talk about. This could be a tremendous benefit to North Carolina's economy from agriculture crops to

converting the methane from hog waste to biodiesel. He felt there were great opportunities to grow that industry in North Carolina.

Mr. Shore then touched on the NC Global Warming Act, which was passed in the fall of last year. This act established a commission to look at economic opportunities and impacts and consider state reduction goals. At some point, transportation issues will be dealt with directly. When that happens, he will be glad to notify the Board of Transportation so they can be part of that conversation.

Mr. Shore stated that ultimately, the problem needed to be solved by the federal government. And yet, there are things that North Carolina can do to position its economy to win. California and New York are positioning themselves to take advantage of economic opportunities.

Ms. Szlosberg stated she thought the opportunities for partnerships and pilots were very interesting.

Mr. Shore stated he would love to figure out where NCDOT and Environmental Defense and others could work together to take steps forward on this issue. Transportation is a huge area.

Mr. McRae asked what has to happen for the economics of supply and demand to kick in to really increase the demand for soybean and corn production to take the place of something like tobacco.

Mr. Shore responded that in the area of hog waste, the economics might be very close. There are a few things. One is just education and outreach so the farmers understand where the future lays -- that there may be opportunities in the carbon market place. The other is government leadership, perhaps in setting a voluntary goal to bring back global warming pollution to the year 2000 levels. This would send a sign to business that low carbon technologies and biofuels are going to have some competitive advantage. Fuel prices are going to continue to rise, but Mr. Shore didn't know where the tipping point would be where biofuels would be cheaper than foreign oil.

Ms. Szlosberg stated there is a lot to be digested from today's discussion and maybe the next step is to create a list of opportunities to examine.

Mr. Betts commented that Mr. McRae made a good point in that the economics were important. There needs to be something in it for the hog farmers and corn and soybean producers.

Ms. Szlosberg responded that perhaps the next step could be to take some of these ideas about what we might be able to do for consideration.

Mr. McRae commented that what Mr. Betts and he were getting at is if you could figure a way to get free enterprise to kick in, it could happen a lot faster than government regulation.

Mr. Shore stated that ultimately we expect that there will be caps at the national level. But then companies will have the ability to reduce carbon whichever way they want. Whoever can use

energy more efficiently or reduce carbon in the most effective ways are the technologies that will succeed in the market place.

Ms. Szlosbery mentioned that she received a report last week that three (3) years ago in Germany, they enacted legislation that essentially put a cap on energy consumption per square foot per house for new construction. This created about 170,000 jobs around the renewable sector and they anticipate that number will rise to 300,000 by the year 2020. So, job creation was the result of innovation and government policy.

Ms. Szlosberg thanked Mr. Shore and asked if there was anything else that needed to come before the committee. Ms Szlosberg announced that next month's meeting would have an extended agenda with presentations about some of our department's environmental initiatives .

Seeing no further business, Ms. Szlosberg adjourned the meeting at 9:30 A.M.

The next meeting for the Environmental Planning and Policy Committee is scheduled for Wednesday, May 3, 2006 at 8:30 A.M. in the Board of Transportation Room (Room 150) of the Transportation Building.

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